

**IN THE CLAIMS**

Amended claims follow:

1. (Currently Amended) A method implemented using a computer for dynamic adaptation of a system in accordance with a contract with criteria associated therewith, comprising:
  - governing a security-related interaction between a plurality of components of the system utilizing the criteria of the contract, the components including an intrusion detection module which is subject to the governing;
  - determining whether the security-related interaction between the components of the system meets the criteria of the contract; and
  - adapting the security-related interaction between the components of the system upon the criteria of the contract not being met;
  - wherein the contract is created by advertising a capability to a control component which handles contract negotiations, receiving a proposed contract based on the capability, accepting the proposed contract, receiving a seal message, receiving and storing a fallback proposed contract, and if replacement of the proposed contract is required, replacing the proposed contract with the fallback proposed contract;
  - wherein the proposed contract is selected from a predetermined set;
  - wherein it is determined that replacement of the proposed contract is required when the interaction governed by the proposed contract no longer meets criteria of a cost model;
  - wherein the system includes the intrusion detection module and triggers a reaction based on the security-related interaction.
2. (Previously Presented) The method as recited in claim 1, wherein the security-related interaction between the components of the system is adapted by adjusting the contract.
3. (Original) The method as recited in claim 2, wherein the contract is adjusted by a method selected from the group consisting of deactivation of the contract, modification of the contract, deletion of the contract, and activation of a different contract.

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4. (Original) The method as recited in claim 1, wherein the criteria of the contract include cost model criteria.
5. (Original) The method as recited in claim 4, wherein the cost model criteria is based on resource utilization.
6. (Previously Presented) The method as recited in claim 4, wherein the cost model criteria is based on performance.
7. (Original) The method as recited in claim 4, wherein the cost model criteria is based on service provisioning.
8. (Cancelled)
9. (Previously Presented) The method as recited in claim 1, wherein the components include the intrusion detection module and an analysis module.
10. (Cancelled)
11. (Currently Amended) A computer program product for dynamic adaptation of a system in accordance with a contract with criteria associated therewith, comprising:
  - (a) computer code for governing a security-related interaction between a plurality of components of the system utilizing the criteria of the contract, the components including an intrusion detection module which is subject to the governing;
  - (b) computer code for determining whether the security-related interaction between the components of the system meets the criteria of the contract; and
  - (c) computer code for adapting the security-related interaction between the components of the system upon the criteria of the contract not being met; wherein the contract is created by advertising a capability to a control component which handles contract negotiations, receiving a proposed contract based on the

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capability, accepting the proposed contract, receiving a seal message, receiving and storing a fallback proposed contract, and if replacement of the proposed contract is required, replacing the proposed contract with the fallback proposed contract;

wherein the proposed contract is selected from a predetermined set;

wherein it is determined that replacement of the proposed contract is required when the interaction governed by the proposed contract no longer meets criteria of a cost model;

wherein the system includes the intrusion detection module and triggers a reaction based on the security-related interaction.

12. (Previously Presented) The computer program product as recited in claim 11, wherein the security-related interaction between the components of the system is adapted by adjusting the contract.
13. (Original) The computer program product as recited in claim 12, wherein the contract is adjusted by a method selected from the group consisting of deactivation of the contract, modification of the contract, deletion of the contract, and activation of a different contract.
14. (Original) The computer program product as recited in claim 11, wherein the criteria of the contract includes cost model criteria.
15. (Original) The computer program product as recited in claim 14, wherein the cost model criteria is based on resource utilization.
16. (Original) The computer program product as recited in claim 14, wherein the cost model criteria is based on performance.
17. (Original) The computer program product as recited in claim 14, wherein the cost model criteria is based on service provisioning.

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18. (Cancelled)
19. (Previously Presented) The computer program product as recited in claim 11, wherein the components include the intrusion detection module and an analysis module.
20. (Currently Amended) An apparatus for dynamic adaptation of a system in accordance with a contract with criteria associated therewith, comprising:  
a module for:
- (a) governing a security-related interaction between a plurality of components of the system utilizing the criteria of the contract, the components including an intrusion detection module which is subject to the governing;
  - (b) determining whether the security-related interaction between the components of the system meets the criteria of the contract; and
  - (c) adapting the security-related interaction between the components of the system upon the criteria of the contract not being met;
- wherein the contract is created by advertising a capability to a control component which handles contract negotiations, receiving a proposed contract based on the capability, accepting the proposed contract, receiving a seal message, receiving and storing a fallback proposed contract, and if replacement of the proposed contract is required, replacing the proposed contract with the fallback proposed contract;
- wherein the proposed contract is selected from a predetermined set;
- wherein it is determined that replacement of the proposed contract is required when the interaction governed by the proposed contract no longer meets criteria of a cost model;
- wherein the system includes the intrusion detection module and triggers a reaction based on the security-related interaction.
21. (Currently Amended) A method implemented using a computer for dynamic adaptation of a system in accordance with a contract with criteria associated therewith, comprising:

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governing a security-related interaction between a plurality of components of the system utilizing the criteria of the contract, the components including a plurality of intrusion detection modules, and at least one firewall which are subject to the governing;

determining whether the security-related interaction between the components of the system meets the criteria of the contract utilizing an analysis module; and

adapting the security-related interaction between the components of the system upon the criteria of the contract not being met utilizing the analysis module;

wherein the security-related interaction between the components of the system is adapted by adjusting the contract by a method selected from the group consisting of deactivation of the contract, modification of the contract, deletion of the contract, and activation of a different contract;

wherein the contract is created by advertising a capability to a control component which handles contract negotiations, receiving a proposed contract based on the capability, accepting the proposed contract, receiving a seal message, receiving and storing a fallback proposed contract, and if replacement of the proposed contract is required, replacing the proposed contract with the fallback proposed contract;

wherein the proposed contract is selected from a predetermined set;

wherein it is determined that replacement of the proposed contract is required when the interaction governed by the proposed contract no longer meets criteria of a cost model;

wherein the system includes the intrusion detection modules and triggers a reaction based on the security-related interaction.

22. (Previously Presented) The method as recited in claim 21, wherein the intrusion detection modules are adapted for communicating information to the analysis module for detecting intrusions.
23. (Previously Presented) The method as recited in claim 22, wherein information includes generalized intrusion detection objects.
24. (Canceled)

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25. (Canceled)
26. (Previously Presented) The method as recited in claim 1, wherein the control component selects the contract from the predetermined set of contracts.
27. (Previously Presented) The method as recited in claim 1, wherein the interaction is prohibited if the proposed contract is not accepted.
28. (Previously Presented) The method as recited in claim 1, wherein another seal message is received from the control component for completing the fallback proposed contract.
29. (Previously Presented) The method as recited in claim 28, wherein the fallback proposed contract is stored, but not activated, before the completion, for use in case the replacement is required.